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Further information given by

DR. S. H. DOUGLASS,  
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## Original Lectures.

## CYANOSIS.

By J. LEWIS SMITH, M.D.,

PHYSICIAN TO THE ORPHAN HOME AND ASYLUM, LECTURER IN THE UNIVERSITY MED. COLLEGE.

[Being a Paper read before the N. Y. Academy of Medicine, February 18 and March 4, 1863.]

THE paper which I have prepared on cyanosis is statistical. It consists of an analysis of 191 cases. Of these fifty-two occurred on the continent, 107 in Great Britain, and the remainder, thirty-two, in this country. For so large a number, and for many records of much value, I am greatly indebted to the pathological societies which have, for the most part, been organized since any one has made this disease the subject of statistical inquiry.

A few patients, whose cases are embodied in these statistics, died when two or three days old, and as all feeble new-born infants are apt to be livid, it may be said that there is no certainty that such are examples of the cyanotic disease. Whether cases in which death occurred early were employed in the statistics or rejected, depended on the character of the observers and of the malformations. If the observers were men of reputation and known accuracy, and the malformations were such as in older children produce cyanosis, they were employed.

The term cyanosis, or blue disease, has been differently used by writers. Some apply it to cases of transient, as well as permanent lividity. Others, including the majority of pathologists, restrict its application to those cases of carbonaceous and non-oxygenated blood, due to some permanent abnormal state of the economy, and therefore continuing till the close of life. It is used by us in the latter signification.

There seems to be a tendency, on the part of some, to ignore cyanosis as a disease. Occasionally in the annual reports of deaths in cities and states, in this country, the name does not appear in the list of deaths for several consecutive years, the term malformation or malformation of the heart, being used instead. This misconception of the nature of cyanosis occurs probably in consequence of its name giving rise to the belief that lividity, which in itself is a trivial matter, is its essential characteristic, while in truth it is only a sign or feature, although conspicuous, and indeed the only one by which the disease can be recognised. Cyanosis is actually a blood disease. Its pathological state may be expressed as follows:—Blood venous in character in the arteries as well as veins. It would be better did its name express its nature, as in leucocythemia, but medical nomenclature is generally defective. A symptom or appearance is often selected as a name, and no harm is really done, provided we are not led into the belief that this symptom or appearance is the disease itself.

Many, perhaps, think that as cyanosis is dependent on a malformation, and is therefore incurable, a knowledge of it is of little use to the physician. But in medicine, as in all physical sciences, there is such a co-relation of facts, that those not of a practical nature frequently throw light on such as are of the greatest utility; so that it may be truly said, that time is not misspent in acquiring knowledge in any part of the vast domain of medicine. Besides, as John Hunter well said, an acquaintance with incurable diseases is useful to the physician, that he may be deterred from unnecessary if not pernicious treatment.

The ancient physicians, so far as can be determined from their writings still extant, were ignorant of cyanosis; whether they overlooked it, or whether those early ages were exempt from it, and the malformation on which it depends, is peculiar to a posterity physically degenerate. The blue disease described by Hippocrates (*De Morbis*, lib. ii. sect. v., page 485, Ed. de Foe's, 1621) was probably some acute febrile affection. Galen, whose voluminous

writings, with an excellent index, are still extant, and whose comprehensive mind embraced the whole range of medical science of the second century, makes no mention of it, so far as I can find. In the middle ages, as appears from a remark of Boerhaave (*Diseases of the Humors*, Acad. Lect. § 732), the common people believed the cyanotic to be the victims of evil spirits; and it is probable that physicians, during this long period of superstition and intellectual lethargy, embraced the popular belief.

On the revival of learning, pathological anatomy began to be more thoroughly and intelligently studied, but it is evident that before the great discovery of Harvey, in the seventeenth century, it was impossible to refer cyanosis to its true cause. In the latter part of the century so auspiciously opened by Harvey's genius, malformations of the heart were observed and described by some pathologists on the continent in cases in which cyanosis must have been present; but it is uncertain, from the brief records which they have left, whether any of them understood the dependence of this disease on the abnormal state of the heart. Boerhaave, in the beginning of the 18th century, attributes "a livid or black color diffused throughout the whole skin," evidently referring to cyanosis, to "1, a relaxation of the vessels, while the *vis a tergo* remains the same, or, 2, to a too sudden increased pressure behind, without a relaxation of the vessels." Viessens, who was a contemporary of Boerhaave, and was more thorough in the examination of morbid as well as healthy structure, narrated the history of a cyanotic patient, with a description of the malformation. But the one who first gave particular attention to the blue disease was Morgagni. This Paduan professor, far excelling his predecessors in thoroughness of observation and accuracy of deduction, broached a theory in explanation of the disease which now, after the lapse of more than a century, has many adherents. In the same century with Morgagni, the 18th, but subsequently to his time, Dr. Pulteney, Wm. Hunter, Baillie, Wilson, and Abernethy in Great Britain, and Jurine and Sandifort on the continent, may be mentioned among those who contributed to a knowledge of cyanosis by the publication of cases with a description of the malformations. Yet, when the present century commenced, no monograph or dissertation had appeared on this disease; and notwithstanding the publication of cases from time to time, the profession, generally, were almost totally unacquainted with its nature. No better idea can be given of the prevailing ignorance in reference to cyanosis at this period than by quoting from the history of a case, narrated by Ribes in 1814 (*Bull. de la Fac. de Méd.*, Paris, 1815). "Many physicians of Amsterdam," says he, "were at different times consulted on the subject of this affection, no one of whom understood its true cause, its essential character. One considered it as partaking of the nature of epilepsy, and caused by the irritation in the nervous system which the wound in the finger produced, the cyanosis having commenced immediately after severe contusion of the finger. Others attributed it to the presence of intestinal worms. Some physicians pronounced it an injury of the liver or spleen. Many held it to be a scorbutic affection. One only believed it to be the result of an unknown organic disease."

Since the commencement of the present century the blue disease has received a large share of attention. According to Forbes's Medical Bibliography, the first dissertation on the subject appeared in 1805, from the pen of Seiler, and from this time till 1832 no fewer than twenty-eight dissertations or monographs were published, either on cyanosis, or on malformations which produce it or at least relate to it. In the list of writers are some of the most eminent names in the profession, as Louis and Bouillaud. The number who have written on this subject since 1832 probably exceeds the number of previous writers. Of those who have contributed most to our knowledge of the disease may be mentioned Farre, Chevers, and Peacock in Great Britain, Gintrac on the continent, and Moreton Stillé in this country. Farre, Chevers, and Peacock wrote on mal-



formations of the heart, alluding incidentally to cyanosis, but their writings contain valuable matter for statistics bearing on the latter subject. Farre's book was published in 1814, and is out of print; Chevers published his papers in the *Lond. Med. Gazette*, commencing in the year 1845 and running through several successive volumes. Peacock's treatise was published in 1858. It contains several original cases, previously narrated by him to the London Pathological Society. The paper by Moreton Stillé, which has attracted much attention, especially in Europe, was his Inaugural Thesis, and was published in the *Amer. Jour. of Med. Sci.*, in 1844. This paper relates entirely, in the words of the author, to "the laws of the causation of cyanosis." The only really complete statistical paper on the blue disease is that by M. Gintrac, published in 1824, in Paris, and embracing all the cases which had been accurately reported up to that time, namely, fifty-three. He, indeed, exhausted the subject for the period in which he wrote, and were it not for the vast accumulation of material since, my task would not have been undertaken.

Two theories in explanation of the occurrence of cyanosis have divided the profession; the one attributing it to obstruction at the centre of circulation, and consequent venous congestion; the other, to admixture of venous and arterial blood through openings in the septa of the heart, or through the ductus arteriosus. The former of these theories originated with Morgagni more than one hundred years ago, and is essentially the same as that advocated by Stillé. Stillé errs in placing Morgagni among the advocates of the other system. The second theory, or that which attributes cyanosis to admixture of venous and arterial blood, is said by Dr. Peacock to have originated with Hunter, but its ablest supporter was Gintrac. Of late there are some pathologists who do not believe that either theory is sufficient to explain the cause of cyanosis, and that the true explanation lies somewhere between the two. Among the most conspicuous of these is Prof. Walshe of London. These theories will be considered in the proper places.

A venous or carbonaceous and non-oxygenated state of the blood may be produced by causes operating in three distinct ways:—First, by obstruction in the air passages, preventing the necessary entrance of air, such as foreign bodies in the larynx, the membranous deposit of croup, thickening of the mucous membrane in severe bronchitis; but the venous condition of the blood, in these cases, is too transient to entitle it to the name cyanosis. Secondly, it may be due to the state of the lungs themselves; but the recorded cases of permanent venous blood or cyanosis in which these organs were in fault are so few that they may be narrated.

In the *Edinburgh Med. Jour.* for October, 1805, Dr. Alex. Marcet, physician to Guy's Hospital, published the case of a lady, twenty-one years old, who during the last part of her life was cyanotic. The autopsy was made by Sir, then Mr. Astley Cooper. The heart was healthy; the lungs seemed distended by an unusual quantity of dark-colored blood, but were free from tubercles or any other appearance of disease; their substance seemed rather more compact than usual, particularly in the left lobe, but still it did not sink in water. "The lungs adhered everywhere to the inner surface of the chest, to the diaphragm, and to the pleura covering the pericardium. These adhesions were some of long standing, others just forming; these last composed of coagulable lymph, having the appearance and texture of jelly, and exhibiting signs of incipient organization." In this case, which subsequent writers have occasionally alluded to, the cyanosis was attributed to the extensive attachment of the surface of the lungs which embarrassed the movements of this organ.

In the April number of the *Glasgow Medical Jour.*, 1855, Dr. Joseph Bell published the history of a man who died at the age of twenty-three years. During the last four or five years of his life he was troubled with a cough, his fingers and toes were bulbous, and nails incurved. He had general lividity, or duskiness, at least four years. The

heart was lower in the chest, and more to the right than usual, and was enlarged; the ventricles were dilated, especially the right, the walls of which were attenuated, but all the valves were healthy; lungs extensively emphysematous; mucous membrane of bronchial tubes thickened and congested. The obstacle to the arterialization of the blood in this case was believed to be the extensive emphysema. In both patients the heart appears to have been perfect.

The following case was narrated by Dr. Peacock to the *Lond. Path. Soc.*, April 5, 1859. A female twenty-four years old, had lividity of the whole surface for a month preceding her death. She had spinal curvature, complained of headache, and finally became delirious, and died comatose. "The heart was large, weighing oz. xijss; great dilation of the right auricle, right ventricle, and the pulmonary artery." The walls of the right ventricle measured four and a half lines at the thickest part. "The pulmonary artery allowed the passage of a ball forty-eight French lines in circumference, while the aortic orifice only admitted one measuring thirty-three lines. The fossa of the foramen ovale was very greatly expanded, and the valve was defective at its anterior edge, leaving an aperture between it and the isthmus of about three lines in diameter." Dr. Peacock, who has given much attention to malformations of the heart, and is the best authority on this subject, believes the cyanosis in this case was due to compression of the lungs from the spinal curvature, but thinks it questionable whether it would have been present had the heart been in a perfectly normal state.

In the *British and Foreign Medico-Chir. Rev.*, Jan., 1860, copied from a continental journal, is the history of "a girl, one year old, apparently healthy to her fifth month; then she presented symptoms of asphyxia, with sibilant respiration, irregular and tumultuous action of the heart, aggravated by lying on the right side, and accompanied by blueness of the face and hands. The attacks occurred in paroxysms, with increased frequency and violence, in one of which the child died. The discoloration of the skin remained during the intervals. The heart was found to be normal, the ductus arteriosus closed, but the foramen ovale sufficiently open to permit the passage of a bristle. The right lung presented the usual lobar divisions. On the inner surface, towards the heart, some large vesicles projected above the surface, varying in size from a hempseed to a pea. The left lung presented the main divisions into lobes; the lower one consisted of three tongue-shaped lobules, their parenchyma being throughout pervious to air. The upper part of the left lung formed a large fibrous sac, with very thin parietes, the pulmonary tissue being cut off abruptly at its margin. The sac was full of air, lined with a smooth mucous membrane which presented full and prominent folds. The largest folds were found near the root of the lungs, where they were found to overlay the orifices of the bronchi. There was some chalky deposit on the posterior wall of the sac. The sac measured vertically 111 millimetres, transversely 93 millimetres (4.36 by 3.65 inches)." The cyanosis in this case, which was reported by Prof. Meyer of Zurich, was believed by him to be due to malformation of the lungs of an emphysematous character.

These four are the only cases which I have been able to find in which cyanosis was due to the condition of the lungs, and they are so few that they may be left out of account in the study of the disease.

Thirdly, imperfect arterialization of the blood may be due to causes which affect directly the circulatory system, such as, on the one hand, probably, certain malignant or grave diseases, as cholera, in which the circulation is embarrassed by the inspissation of the blood; and, on the other hand, structural errors, preventing the free and regular flow of blood to or from the lungs. Under this latter head come all cases of cyanosis, with a few exceptions, like those mentioned above, in which the lungs are in fault, and the error of structure has been found in every case either in the

heart or in the great vessels in immediate connexion with it.

Writers on cyanosis state that there is a preponderance of males to females affected with it. Aberle of Vienna says that two thirds were males in an aggregate of 180 cases which he collated. In Gintrac's cases 28 were males and 16 females; in Stillé's, 41 were males and 31 females. The sex is recorded in 134 of the cases collected by me, of which 78 were males, 56 females; and if those cases are excluded in which cyanosis was due to obstruction at the mouth of the pulmonary artery, the number of the two sexes is the same. Since January, 1858, according to the Reports of the City Inspector, 207 have died in this city from cyanosis, of which number 117 were males, 90 females. In England, for two years, 418 males died of cyanosis, and 273 females. Although statistics of different cities and countries agree in the fact of an excess of males over females, there does not appear to be that great preponderance of males which the earlier writers on this disease believed to exist.

The cause of the malformation on which cyanosis depends is wrapt in much obscurity. Sometimes mothers attribute it to strong mental impressions felt during utero-gestation. The mother of a patient treated by Dr. Peacock stated that, "two months before her confinement, she was frightened by seeing a child killed, and never recovered from the shock she sustained." (*Mal. of Heart*, p. 37.) In another case "the mother was much out of health, and stated that, when pregnant with the child, she was greatly alarmed by seeing a man who was dying of asthma." (*Op. cit.*, page 57.) In another instance the mother was frightened at the fifth month of pregnancy (page 41); and in still another case, recorded by Dr. Peacock, the mother, four or five months before her confinement, was greatly alarmed by her husband, who was insane, standing over her for two hours with a loaded pistol." (Page 43.)

Occasionally the malformation appears to be due to some vice or taint in the system of one or both parents. In a case quoted in the *Gazette Medicale* for Dec. 28, 1850, from another continental journal, it is stated that "the mother, who had formerly suffered from rickets, gave birth to five children, all of whom died immediately or shortly after birth with symptoms of cyanosis. The father died at the age of thirty-six of phthisis." Dr. Peacock relates a case in which the father was livid, and had the "pigeon-breast" common in the cyanotic. In the history of a patient, which was communicated by Cooper to Farre (Case 163), it is related that "VICES of conformation of the heart appeared to have been inherent in the family. Of 12 infants only 4 survived, and more presented signs of heart-disease." Dr. Buchanan relates the history of a child which was the second that had suffered and died in the same family in the same way (Case 40). A patient treated by Mr. Leonard was the sixth child of the family who had died at about the same age with symptoms of cyanosis. Such instances are, however, exceptional. Ordinarily, the cyanotic have not only healthy parents but healthy brothers and sisters.

A patient whose history is given by Dr. William Hunter, was born at the eighth month, but in nearly all other cases the full period of uterine existence was reached.

The opinion was long since expressed by Gintrac that the number affected with cyanosis, to the entire population, varies in different countries. It is probable that the occurrence of the blue disease is not greatly, if at all, influenced by the nationality, but it is certainly dependent to a considerable extent on the condition of society. It is less frequent in a community in comfortable circumstances, and engaged in wholesome and quiet occupations. Pure air and outdoor exercise, plain nutritious diet, freedom from cares and anxieties, in fine, causes which promote the physical well-being, diminish the liability to an ill-formed and cyanotic offspring. And, conversely, impure air, improper and insufficient diet, grief, etc., increase the percentage of

cyanotic cases. Hence it is a rare disease in the rural districts, and comparatively frequent in the cities, especially in a large city like New York, which contains a numerous indigent and care-worn population, living from year to year in the midst of agencies which operate stealthily but certainly to enervate the system and undermine the health.

These remarks are abundantly substantiated by statistics. In New York city, for the six years ending with 1860, there was one death from cyanosis to 436 deaths from all causes; and in Brooklyn the proportion estimated for two years is about the same. On the other hand, in the State of Kentucky, which contains few large cities, and in the death reports of which cyanosis is included in the general term malformation, there was, during a period of five years, one death from malformation to 2469 from all causes. In the State of South Carolina, for three years, there was one death from cyanosis to 5018 from all causes. In the State of Massachusetts, for two years, there was one death from cyanosis to 1136 from all causes, and two-thirds of the cyanotic cases occurred in the counties of Suffolk, Essex, and Worcester, which contain large cities. In London there was one death from cyanosis to 755 from all causes during a period of three years. On the other hand, in England, including the city of London, there was, for the ten years ending with 1857, one death from cyanosis to 1589 from all causes; and in the rural districts of Monmouth and Wales there was only one death from cyanosis to 5578 deaths from all causes during a period of two years.

In 138 cases the records state at what time lividity was first observed. In 97 of these it was within the first week, and generally within a few hours of birth. In the remaining 41 cases it commenced as follows:—

In 3 at 2 weeks.

" 1 " 3 "

" 2 " 1 month.

" 7 from 1 to 2 months.

" 5 " 2 " 6 "

" 5 " 6 " 12 "

" 3 " 1 year to 2 years.

" 6 " 2 " " 5 "

" 1 " 5 " " 10 "

" 6 " 10 " " 20 "

" 1 " 20 " " 40 "

" 1 over 40 years.

#### 41

In these forty-one cases, in which blueness did not occur till after the age of one week, if the patient were less than two years old when it commenced there was frequently no obvious exciting cause, but above this age, with three exceptions, such a cause is known to have been present. It is interesting to observe how trivial the exciting cause frequently is, and equally interesting to note how long patients have enjoyed good health, not having the least lividity, although the anatomical vice to which the final development of cyanosis is due has existed from birth.

Dr. Theophilus Thompson relates in the *Medico-Chir. Trans.*, vol. xxv., the history of a lady, thirty-eight years old, who was well till an attack of Asiatic cholera, after which her health was permanently impaired. Two years before her death she passed through a course of fever, and from this time was cyanotic. In the *Philadelphia Med. Examiner*, June, 1850, Dr. Waters relates a case in which cyanosis began at the age of six years in an attack of measles. In a case published by Mr. Napper, in the *London Med. Gazette*, 1841, the child fell at the age of six months, and from this time had cyanosis. A female, whose history is given by Prof. Tommasini of Bologna, and quoted by Bouillaud, became cyanotic at the age of twenty-five, in consequence of difficult parturition. In the *London Lancet*, 1842, Mr. Stedman relates a case in which cyanosis began at the age of ten weeks in an attack of convulsions. In the *American Jour. of Med. Sciences*, 1847, Dr. John P. Harrison published the history of a baker, twenty years old, in whom cyanosis began five years previously after

great effort in carrying wood. Louis and Bouillaud quote from M. Caillot the case of a child who became cyanotic at the age of two months in an attack of hooping-cough. Louis also narrates a case in which hooping-cough had the same effect at the age of twelve years. Ribes treated a child in whom the blue disease began at the age of three years from a severe contusion of the fingers. In a case related by Marx it commenced at the age of ten months from a blow on the back, inflicted by the mother. In the *Med. Times and Gazette* for 1855 Mr. Speer gives the history of a female, who, at the age of thirteen years, was put in a place requiring considerable exertion, and from this time was cyanotic. A patient, whose case is narrated by Cherrier, fell into a deep ditch in the winter season, and immediately after had a low fever, from which the blue disease commenced. In a case published by Tacconus the exciting cause was believed to be fright, in consequence of a fall from a great height, and in another, related by Bouillaud, it was a blow received on the epigastrium after the patient had passed the age of fifty years. Similar cases are related by Mayo and Peacock.

It will be seen that the exciting cause of cyanosis is usually such as produces a profound impression on the system, and affects the action of the heart. Precisely in what way it operates to develop the disease has not been satisfactorily explained. Mr. Mayo conjectures that, in the case related by him, there was previously some compensation which ceased or became inadequate in consequence of some change produced in the economy. Although cyanosis may not appear for months, or even years, there is rarely improvement for any considerable period after it is once developed. Appearances of amendment are deceptive. The disease, when not stationary, is progressive, and this explains the fact that few survive the middle period of life.

The symptoms of cyanosis vary in intensity in different patients, and in the same patient at different times, being milder if he is quiet and the mind calm, more severe if active or if the mind is agitated. In mild cases, in a state of rest, they nearly or quite disappear, so that a stranger would not suspect that there was any serious ailment. They are aggravated by any cause which accelerates the action of the heart. In some, cyanosis is increased by the most trivial disturbing influences, among which may be mentioned nursing, dentition, crying, coughing, and slight emotions of joy, sorrow, or anger. In more than one case it has been perceptibly increased by the stimulus of digestion, the color being deeper after a full meal than before.

The cyanotic hue varies in different individuals from duskiuess to a deep purple, almost black color. It is usually most marked in the visage, especially the palpebre, cheeks, nose, and lips, in the ears, fingers, and toes, and upon the mucous surfaces. It is sometimes, without any assignable cause, confined to a portion of the body. In a case related by Mr. Steel in the *London Lancet*, 1838, the upper part of the body was livid and cedematous, and the lower part pallid and shrunken, and yet the malformation of the heart was such as is commonly present in cyanosis. In the *London Med. Times*, March 8, 1845, copied from the *Gazette Médicale*, is the history of a child, six years old, in whom the color was deeper on the right than left side. There had been, however, hemiplegia of this side in infancy, but this had entirely passed off. On the other hand, in a case of rare malformation communicated by Cooper to Farre, in which the upper part of the system was supplied chiefly by arterial and the lower by venous blood, the discoloration was general. In rare instances livid macule have been observed, like those of purpura.

Those affected with cyanosis have generally at birth been well formed and of the usual size, and in most cases, for a considerable period after birth, the appetite is good, bowels regular, and the system well nourished. But when cyanosis becomes so severe, as it does sooner or later, that the symptoms are rarely absent, digestion is imperfectly performed, and the body becomes either emaciated or stunted

and puny. It may be stated, as a rule, that nutrition is in inverse proportion to the gravity of the cyanosis. In thirty-three out of forty-one cases in which the condition of the system, as regards nutrition, was recorded either a short time previously to death or at the autopsy, the body was either considerably emaciated or else diminutive, and those who appeared to have been well nourished were usually such as had died early or of some inter-current disease.

In this connexion may be mentioned two interesting and curious abnormal developments. The chest is often flattened laterally with a projecting sternum, so as to present an appearance generally described in the records as "pigeon-breasted." Sometimes the most prominent part is directly over the heart, and in one or two cases the sternum was observed to be deflected towards the left. In the majority of the records, however, no mention is made of the external appearance of the chest.

The other abnormal development is more remarkable, and has never been satisfactorily explained. In twenty-eight cases it is stated that the tips of the fingers or toes, or both, were bulbous. This hypertrophy, if slight, is likely to be overlooked, and that it was observed and recorded in so many cases renders it probable that it was present in a much larger number. In one case the anatomical character of this enlargement was examined, and was believed to consist entirely of hypertrophied cellular tissue. The nails are often incurved over the deformity. At a meeting of the Lond. Path. Soc. in 1859, Mr. Ogle narrated the history of a laborer, fifty years old, who had swelling, numbness, and lividity of the left arm, from the pressure of an aneurism, and the fingers on this side were clubbed as in cyanosis. Why this bulbous growth should occur in consequence of the circulation of carbonaceous and non-oxygenated blood must at present remain a mystery.

An interesting feature in cyanosis is the low grade of animal heat. The temperature of the body is in all cases below that of health. This is especially noticeable in the extremities. There has not been a sufficient number of accurate thermometric observations to determine whether the internal heat is usually reduced. The following only have been recorded:—Mr. Fletcher relates the history of a young man in the *Medico-Chir. Trans.*, vol. xxv., in whom the thermometer placed in the mouth did not stand above 80° Fahrenheit. Hodgson reports the case of a man, twenty-five years old, in whom the thermometer placed on the tongue rose to 100°, while in his own case it was two or three degrees below that term. In an experiment recorded by Nasse, the instrument placed in the mouth fell little if at all below the healthy standard; applied to external parts, it stood at about 21° Reaumur.

The lack of heat is the source of great discomfort to a cyanotic patient. In mild weather he requires a fire to keep him warm, or an amount of clothing which to others would be intolerable, and in cold weather slight exposure strikes him with a chill. Nor can he increase his heat by active exercise, since his infirmity disqualifies him for this.

Although the temperature of the surface is so low, the occurrence of perspiration, sometimes profuse, is mentioned in several of the records.

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THE distinguished physician, Sir Henry Holland, arrived in New Haven on Thursday last, and spent the day in calling upon several distinguished citizens. A New Haven paper says: He is past seventy years of age, but has lost none of his mental or physical activity. He uses neither cigars, tobacco, nor wine. Since 1855 he has extended his travels to Sweden, Lapland, Russia, Iceland, Jerusalem, Damascus, the Danube, Constantinople, Asia Minor, twice to the United States, and twice to Canada.—*Post*.

M. NÉLATON proposes and practises a new method of cauterisation, using a fine jet of flame, produced by the combustion of ordinary gas, for the purpose.



## Original Communications.

### CHEILOPLASTIC OPERATION.

SIMANOWSKI'S MODIFICATION OF DIEFFENBACH.

By FREDERIC D. LENTE, M.D.,

SURGEON TO WEST POINT FOUNDRY.

P. D., aged 75, a healthy, temperate subject, applied to me in May last in order to get advice concerning a cancer of the lower lip, which only appeared in March, and had already involved the whole vermilion border of the lip, and had extended down two-thirds of the distance to the base of the jaw, so rapid was its growth. I was compelled to defer the operation on account of absence from home for two weeks, during which time it had made some further progress.

It was, of course, necessary to remove the entire lip, and the operation was performed in the following manner, with the assistance of Dr. Pryor, late House-Surgeon of Bellevue Hospital, and Dr. W. Young:—The patient having been thoroughly etherized, an incision was made from either angle of the mouth outwards, and curving a little upwards towards the ear, extending quite through the thickness of the cheek as far as the *masseter* muscle, then only down to the muscle for some distance further. Another incision was then made on either side, extending from the outer end of the first in a curvilinear form along the jaw, and gradually approaching its base, and finally running along the base to a point almost far enough to meet a vertical line dropped from the angle of the mouth. The diseased lip was then included in a V-shaped incision extending from the angles of the mouth, the apex extending a little below the base of the jaw, and detached from the bone.

The plastic portion of the operation was now continued by dissecting up the angle marked out by the above described curved incisions, forwards to some distance beyond the edge of the *masseter*, just so far in fact as was found necessary in order to allow the edges of the V incision to come easily together in the median line. A considerable number of pins and sutures were used, silver and silk, to bring the parts accurately in apposition; so much so, that no plasters were necessary, although they were applied in front for a few hours as a matter of precaution to prevent the disturbance of the ends of the pins. The point of greatest tension was secured by means of a needle recommended and used by Dr. G. Buck in similar cases, made by giving a trocar point to a small-sized knitting-needle, and then coating with silver; by drawing it through and cutting an inch or so for each suture, it may be used several times, if necessary, in the same operation. The moderate angular gap left on either side of the cheek by drawing forward the flaps, was easily filled up without any tension by approximating the edges of the first incisions.

**Remarks.**—This mode of repairing the loss of the lip and chin is much more satisfactory than other procedures commonly recommended, the detachment of the large lateral flaps allowing the edges to come together with remarkably little tension, while the gap, to be filled up after forming the lip, is so elongated by the manner in which the incisions are made, meeting at a very acute angle, that its edges are easily secured by ordinary fine silk sutures. The only objection is, in so aged a patient as mine, the loss of blood, which is much greater in this operation than in others. It is annoying in two ways—by exhausting the strength, and by flowing into the throat—thus interfering more or less with respiration while under the influence of the anæsthetic. The necessity of securing a considerable number of vessels, which was done with very fine silk, protracted the operation very much. To avoid the anticipated hæmorrhages as far as possible, that part of the operation which is usually done last was done first, in

order not to be compelled to secure the same vessels twice. This was found to succeed, as there was but trifling hæmorrhage from the last incisions.

The success of the operation was perfect. At the end of four days the pins and most of the sutures had been removed, and union was perfect and accurate throughout; it was subsequently necessary to break up the adhesions at one point in order to allow the escape of matter, which formed to a moderate extent. The patient had no difficulty in eating, drinking, or talking, after a day or two. When he left for home, within two weeks after the operation, a new vermilion border was rapidly forming.

Within the last few days, that is, two months after the operation, I have seen the patient; no change has taken place for the last two weeks, according to the patient's account; the contraction resulting from the cicatrization is completed, and he has a good mouth, the lower lip, however, being somewhat shorter than the upper, but the border is quite natural, rather thin (as it generally is in a very aged person with no teeth). It will be observed, in the account of the operation, that no attempt was made to form a new vermilion border to the lip, as is usually recommended; this would have been difficult, would have prolonged an already tedious operation, would have rendered the pain and soreness succeeding it much more severe, from the tension of the sutures, and might have failed in its object from the subsequent swelling and inflammation. The sequel shows that it was entirely unnecessary; within a few weeks there was a smooth and uniform border to the lip.



The above sketch shows the lines of incision followed in the operation. The dotted line indicates the extent to which the flesh was drawn forward.

COLD SPRING, N.Y., Aug. 23, 1893.

### BROMINE IN HOSPITAL GANGRENE.

By M. GOLDSMITH, SURGEON U.S.V.

I PRESENT the consolidated statement of the cases of hospital gangrene of which I have gathered the records from U.S. military hospitals in this city, in New Albany, Ind., Nashville and Murfreesboro, Tenn. In explanation I have to state that the roll and the reports of these cases in full are on file in the Surgeon-General's office. It will be perceived that amongst the cases treated with bromine there are recorded four deaths. One of these cases is reported as having been brought into the hospital moribund. Two were cases in which the disease attacked the track of ball wounds passing through the thigh, and in which the bromine was applied to the external parts, the apertures of entrance and exit only, and therefore did not touch the major part of the gangrenous surfaces. One, in which, with a wound like those just mentioned, the cellular tissue of the limb from the trochanter major to the malleoli was

destroyed by cellulitis. It will also be noticed that in four cases the bromine is reported to have failed in arresting the gangrene. In each of these the bromine had been applied, I have reason to believe, much more frequently than is compatible with the establishment of granulation—for bromine is a caustic agent. In one case granulation occurred two days after the abandonment of the bromine, and the use of a weak solution of creasote; in two cases after the use of a solution of the persulphate of iron, and in one case after the use of a cow-dung poultice.

CONSOLIDATED STATEMENT OF CASES OF HOSPITAL GANGRENE,  
TREATED IN LOUISVILLE, NASHVILLE, MURFREESBORO, AND  
NEW ALBANY.

	Whole Number.	Recovered.	Died.	Amputations.	Average Duration of Treatment.	Percentage of Deaths.
					Days. Hours.	
Treated with Bromine in any way - - - - -	152	148	4	0	5 14	2 65-100
Treated with Bromine Pure exclusively - - - - -	27	25	2	0	2 22½	
Treated with Bromine in Solution exclusively - - - - -	86	84	2	0	6 11½	
Treated with Bromine Pure after the Solution failed - - - - -	8	8	0	0	12 18	
Treated with Bromine after Nitric Acid failed - - - - -	23	22	0	1	3 16½	
Treated with Bromine after other Remedies failed - - - - -	8	8	0	0	3 4	69 54-100 } .50
Treated with Nitric Acid exclusively - - - - -	13	5	8	0	3 14 2.5	
Treated with other Remedies exclusively - - - - -	13	7	5	1	7 13 5.7	
Treated with other Remedies after Bromine had failed - - - - -	4	4	0	0		

I beg here to call the attention of such of your readers as may be interested in the matter to the fact that almost all the surgeons who have adopted the bromine treatment of hospital gangrene rely now upon the use of the pure undiluted agent, the various solutions having been found less prompt in their effects, and, for the ends in view, less reliable.

LOUISVILLE, KY., Aug. 28, 1863.

## Reports of Societies.

### NEW YORK ACADEMY OF MEDICINE.

STATED MEETING, May 20, 1863.

DR. JAMES ANDERSON, PRESIDENT, IN THE CHAIR.

#### HOSPITAL GANGRENE.

(Concluded.)

DR. POST.—The last speaker has gone so fully into the subject of the history, etiology, and symptomatology of hospital gangrene, that I shall not dwell upon this department of the subject, but merely present to the Academy some observations that I have been able to make during a recent visit of inspection to the cities of Nashville, Louisville, and Murfreesboro. I have scarcely any remarks to make in addition to those made by Dr. Parker, with regard to the constitutional or local symptoms of this disease.

The disease attacked recent wounds, in several instances; in other cases the disease broke out in parts which had been suppurating for a considerable length of time, and when the process of cicatrization was far advanced. In

other cases, or in one case in particular, there was no local lesion that was known to have preceded the gangrene—there was simply a slight vesicle to commence with upon the surface of the skin. One of the most formidable cases occurred in a patient where a seton had been worn for some time in the back.

The disease did not occur in a very large number of cases in any of the hospitals, and did not show any marked tendency to spread; indeed, the cases for the most part seemed to be remarkably sporadic. The disease was not traced in any of the cases to contagion from the application of matter of patients previously suffering from the disease. In one instance, in a hospital in Murfreesboro, there were, I think, nine cases congregated in one part, having been sent from the different hospitals in the neighborhood. That ward was not remarkably well ventilated, neither was its sanitary condition remarkably good; still the disease did not spread from these cases to other patients, although others had suppurating sores in that ward. There were three recent cases that I saw for only three or four days; in them the sloughing process had not been arrested; but there were a number of other cases where even cicatrization was advancing. There were no cases that spread to other patients. It was not found necessary to remove any of these patients to tents. There was nothing remarkable in regard to the character of the disease differing from hospital gangrene as described by authors, and as seen in other places. The disease occurred rather suddenly: a spot would first become gangrenous, and then spread, until a large portion of the skin, cellular tissue, and sometimes the fibrous and muscular tissues were converted into a soft putrid mass, of a highly offensive smell, and of an ashy hue. The disease seemed also to have a tendency to spread beneath the margin of the integument, by a sort of phagedenic ulceration. The muscular tissues resisted the progress of the disease more than the skin and cellular tissue. In some cases the areolar tissue was beautifully dissected out from between the muscles.

According to my observations, and according to the reports of the different surgeons, very much more depended upon the local treatment of the disease than the members would be led to infer after hearing Dr. Parker. Indeed, the local treatment seemed to have played the most important part in arresting the progress of the disease. The remedy used more than any other was one introduced by Dr. Middleton Goldsmith, Assistant Med. Director. I refer to bromine, or some of its preparations. It is principally with reference to the action of bromine as a local application that I have risen to speak. The preparations of bromine that have been used have been either the pure bromine, a dark red liquid with a pungent odor, or more frequently a preparation analogous to Lugol's solution of iodine—160 grains of the bromide of potassium are dissolved in 4 oz. of water, this solution is placed in a bottle, and an ounce of bromine is added, making a solution of the bromuretted bromide of potassium. In some cases there is a simple residuum, owing doubtless to some existing impurity in one or other of the ingredients. It is a reddish-colored fluid, from which the fumes of bromine are given off. The mode of making the application has varied somewhat with different surgeons of the hospitals I have visited, but those who used it with the most care and success used it in the manner which I will indicate. In the first place, after the sloughing process has been fully established, when the tissues involved have become positively putrid, and there is a disposition to form a separation between sound and healthy parts, all the dead portions are carefully detached by means of a scissors, after which the denuded part is thoroughly washed with a syringe and lukewarm water; after this the comp. sol. of bromine is brought in contact with every portion of the sore either by means of a camel's hair brush or a small syringe. If there be sinuses, the fluid is injected into them, and the same thing is done with the undermined integument. In case of a gunshot wound through the limb, when the syringe



cannot easily be used, a small strip of old linen is attached to the eye of a probe after having been dipped in the solution, and drawn through the wound. This linen is then left in until the next day's dressing.

The first effect of the bromine was very remarkable in removing all offensive odor—the fetor would be removed in a very remarkable manner, so much so that you had to apply your nose close to the surface of the sore to detect any odor whatever. The next effect was to coagulate the albumen and leave the part as if varnished—there was no appearance of putrefaction whatever. The patients complained of severe pain at the time of the application, but I have reason to believe that such complaints were much exaggerated. The dressing applied after the application of the bromine varied in different cases. In most cases the surgeons were in the habit of applying yeast poultices, and they also used as a substitute for this a fermenting substance made by adding carbonate of soda and tartaric acid to a poultice. I suggested to them the propriety of substituting the bicarb. potash for the cream of tartar, on the ground that the gas would in that event be more slowly evolved. In other cases the liq. sod. chlorinata was used; in fact, numerous applications of the sort were made according to the peculiar notion of the Surgeon-in-charge.

I found that there were some of the surgeons in Nashville who were sceptical with regard to the advantages of bromine as a local application, they maintaining that they had better success from the use of nitric acid; but I observed that some of these gentlemen had applied it in rather a careless way, while they had used the nitric acid more thoroughly and with more care. There was one gentleman particularly who seemed very sceptical. I informed him that he had not applied it as carefully and as thoroughly as the other surgeons, and therefore he erred in a good effect. I also suggested that if he would use it in another way he would have like success. Since I have returned to the city I have received a letter from that gentleman, and he tells me that he has taken my advice with reference to its mode of application, and has been abundantly successful.

With regard to the constitutional treatment, I believe there can be very little discrepancy of opinion concerning the use of tonics, stimulants, and good food, in this disease.

I will observe that those gentlemen who have used bromine so largely look upon it as an antidote to the poison, whatever it is, of hospital gangrene, and consequently they do not advocate the free circulation of fresh air as they otherwise would.

I observed that bromine was used for disinfecting the atmosphere of the ward, by pouring it into saucers, or by carrying an open-mouthed bottle containing the liquor through the ward. This was done five minutes at a time three times a day, and the fact that the gangrene did not spread where bromine was used, seems strong proof of the existence of the property claimed for it.

The frequency of its application varied with different surgeons from once to twice or three times in twenty-four hours. When the surface of the granulations became visible, the solution was weakened. In the cases that I had the opportunity of seeing, the disease was arrested throughout the great body of the sore within two or three days. In the case of the seton in the back, the disease was not arrested ten days after the application, but I have afterwards understood from Dr. Goldsmith that the disease was finally entirely checked.

I have come to the conclusion, from what I have seen, that the application in the treatment of hospital gangrene is very highly conducive to the welfare of the patient, and I think that it will prevent the spread of the disease.

There is one important fact connected with bromine which I think well worth relating. I saw at Louisville a case of hospital gangrene of the leg, where, in the course of the disease, the posterior tibial artery became involved, and hæmorrhage occurred. The interesting feature in this was that the Surgeon-in-charge tied the artery at the bot-

tom of the sloughing surface, and applied the bromine immediately over it. I saw that case a little less than a week after the application occurred, and the case was doing remarkably well. The ligature had separated the day before I saw it, and at that time the sore was in a state of healthy granulation. I am unable to say whether any further hæmorrhage occurred. Dr. Goldsmith informed me that the case was the fourth one where such a result was obtained from the application of bromine. This is a very remarkable fact, because the general result of tying arteries in the midst of sloughing parts is that hæmorrhage takes place very soon again. If bromine has the power of arresting this sloughing process, it is a fact well worthy of our investigation.

Dr. Post, in conclusion, alluded to the good effects claimed by the surgeons for bromine in cases of diphtheria and erysipelas. In the "Park Barracks," in Louisville, erysipelas broke out with great severity, and the moment that the bromine treatment was introduced the disease ceased to spread. The remedy was used both in fumigation and as a local application. The surgeons were in the habit of moistening lint with the compound solution of bromine and applying it directly to the part, and covering the whole with oiled-silk. Dr. Post saw a number of cases treated in that way where improvement had taken place in a very short time. He was informed by those gentlemen who had charge of the erysipelatous hospital, that in almost all cases, in from twelve to twenty-four hours after the commencement of the treatment, the erysipelas began to subside. It scarcely in any case continued to spread beyond two or three days; generally its spread was checked within from twelve to twenty-four hours.

Dr. DETMOLD alluded to the investigations of a distinguished German writer, who maintained that the deposit on the surface of hospital gangrene consisted of a multiplied cell growth, which, immediately on being formed, underwent destructive assimilation. He endorsed the treatment by the local application of nitric acid, and also enumerated several remedies which had proved of great efficiency in the treatment of the disease during the Italian campaign, as, for instance, the saturated solution of chloride of potash, cold tar, and tr. iodine.

Dr. EDWARD JARVIS, of Mass., by invitation, made a few remarks concerning the action of bromine as observed by him while on a tour of inspection through some of the cities visited by Dr. Post. He corroborated in the main the statements made by Dr. Post. In reference to the case spoken of by Dr. Post, where the tibial artery was ligated in the midst of sloughing tissue, he stated that he had seen the case on the 25th day, perfectly recovered. Dr. Jarvis had learned from Dr. Goldsmith that bromine affected only the dead tissue in cases of gangrene, and when applied to the skin the cuticle only was destroyed.

Dr. PERCY stated that he had been in the habit of using the saturated solution of bromine for diphtheria, and with very satisfactory results. He had also used it with equally good effect in syphilitic ulceration of the throat and in tonsillitis. In conclusion, he alluded to the fact that Dr. Metcalfe had for some time been in the habit of using a combination of bromine and iodine in throat affections with great success.

The Academy then adjourned.

## NEW YORK PATHOLOGICAL SOCIETY.

STATED MEETING, March 25, 1868.

DR. H. B. SANDS, VICE-PRESIDENT, IN THE CHAIR.

REPORT OF A REMARKABLE OBSTETRICAL CASE; VERSION; METRO-PERITONITIS; GANGRENE OF THE UTERUS; AUTOPSY.

DR. F. D. LENT presented the following report:—

Mrs. E., aged 35. The husband of this patient applied to me on Monday, Feb. 23, 1863, in a state of great excitement, requesting my immediate attendance on his wife,

who was in a dying condition. Upon reaching the house, which was near by, I learned the following particulars:—That Mrs. E., a person of strong constitution and previous good health, had been taken in labor with her fifth child on Friday evening, Feb. 20th. That is to say, the membranes ruptured at that time without any previous pain. On Saturday morning, Feb. 21st, she summoned a midwife, who found a hand presenting in the vagina, but, up to this time, no labor-pains. She continued in this state until about four o'clock p.m., when the midwife gave some drug, after which pains of a moderate character set in. Soon after this the patient, suspecting something wrong, sent her husband in haste for the nearest physician. He arrived at about six o'clock, and immediately proceeded to introduce his hand into the uterus. The patient had no anæsthetic, and states that he caused her intense pain, and that she felt his hand "high up in her stomach." After manipulating for some time, another physician whom he had sent for arrived, and, having administered chloroform to partial anæsthesia, proceeded to operate. After some attempts at version he desisted. These attempts were renewed at long intervals, until between twelve and one o'clock on Sunday morning, six hours and a half from the commencement of the operative procedures, when the child was turned and delivered. At about ten o'clock, however, while manipulating within the uterus, he succeeded in detaching and bringing away the placenta. The patient was never free from severe pain, or from the manifestations of it, from the commencement of the operation to the end, although anæsthetics and anodynes were administered to a certain extent.\* On Sunday, Feb. 22d, the patient was in a suffering condition; her abdomen was swollen and tender; she was feeble and restless, and her lochia suppressed. On Sunday evening the physician in attendance gave her some anodyne, but she obtained little or no relief, and vomited occasionally. On Monday morning, Feb. 23d, her suffering had increased, but her medical attendant stated that she was doing better than could be expected, and left some anodyne draught to be given at certain intervals. It was about two hours after this that I was called in, and urged by the patient and her friends (having been for some years the family physician) to take charge of her. Having sent a notification of the facts to the previous attendant, I did so. Present condition, Feb. 23d.—Patient is lying on her back, with her knees drawn up towards the abdomen, and refusing the least change of position, the nurse having repeatedly attempted this in order to administer an enema. The tympanitis is very considerable, and the tenderness on pressure also—especially so over the pubes and right ovarian regions; countenance anxious; pulse frequent, feeble, and intermitting; skin dry; tongue inclined to dryness; thirst considerable; lochia suppressed: is vomiting profusely a yellowish fluid, which is ejected with but little effort. Took castor-oil yesterday, but has had no operation. Patient is crying out piteously for some relief from the abdominal pain. *Diagnosis*.—Metro-peritonitis. *Prognosis*.—very unfavorable. Immediately administered a full dose of morphia by hypodermic injection, which soon induced quiet and a tendency to sleep; applied a large blister over the abdomen; and ordered an enema *per rectum* of morphi., gr. ss., q. 3 h.; also nourishment in the shape of concentrated beef-tea, and a little egg-nogg. Feb. 24th.—Feels much better; vomiting has been arrested; has dozed a little; has less pain; pulse not much changed. Repeat hypodermic injection. To take pil. morph. sulph., gr.  $\frac{1}{2}$ , q. 3 h. Feb. 26th.—Seems rather better. It has been necessary to give the pills every two hours. She sleeps but little; the tympanitis has increased; pulse about 130, and less intermittent. Bowels have moved twice; vomited a fluid to-day which she described as having a decidedly stercoraceous smell and taste; no nausea since. Still lies in the same position. March 3d.—There has been

no marked change in the condition of the patient since last date. The tympanitis has gradually increased; bowels have moved several times spontaneously; nothing remarkable in the appearance of the evacuations; she has passed water at all times without difficulty; pulse has varied from 130 to 140, feeble, has lost its intermitting character. The tenderness on pressure is now mostly confined to the lower part of the abdomen. It has been occasionally found necessary to increase the doses of morphia from gr.  $\frac{1}{4}$  to gr.  $\frac{1}{2}$ . Has now poultices sprinkled with oil of turpentine over the abdomen, the blistered surface having healed. March 8th.—Has been rather failing; pulse 126; tympanitis the same; has had diarrhoea for some days, and has required frequent doses of tannic acid with the morphia. Takes her nourishment with some relish; sleeps but little. March 10th.—At three o'clock p.m. yesterday there was a gush of yellowish fluid *per vaginam* which had a putrid odor. This discharge is still considerable, and has rather a feculent odor. March 13th.—About the same; requires her anodynes only once in four to six hours. Bowels still open. The nurse states that for the last twenty-four hours the urine has been muddy and dark. It has the appearance of urine and feculent matter mingled, and, under the microscope, shows an abundance of large exudation corpuscles and large crystals of the triple phosphates. It is probably a mixture of the contents of the bladder and the vagina, the vaginal discharge still continuing abundant. Complains now of pain along the descending colon, extending to the umbilicus and spine. March 14th.—Sinking gradually. March 15th.—This morning her friends thought her better, but in the afternoon a bloody discharge in considerable quantity took place from the vagina, and she rapidly sank and died.

DEAR DOCTOR:—At your request we made a post-mortem examination of the body of Mrs. E., of which the following is a history written from notes made at the time:—

*Autopsy, twenty-one hours after death, weather very cold.*—*Rigor mortis* well marked. Body moderately emaciated. Abdomen markedly tympanitic. Percussion gave "dull resonance" (a muffled sound) over every region except the hypogastric, which was perfectly flat. On making the usual incision, it was found impossible to avoid wounding the intestines except by the greatest care, owing to the intimate adhesions of the intestines to one another, and to the abdominal walls. All the contents of the abdominal cavity, below the liver and stomach, were bound together in one solid mass; the intestines so firmly united that, in separating them, the peritoneal coat was invariably stripped off. The intestines presented a deep lead color, merging into a purplish brown, and all their coats were softened; so much so, that, in holding them out of the way by hooks, they would tear like brown paper. The muscular and mucous coats were nearly of their natural color, being, if anything, a little pale. Large quantities of light colored fæces were found throughout their length. About eight ounces of clots and a pint of serum were found in the hypogastrium, shut in by adhesions; another collection in right iliac fossa of about half the quantity. Small collections of fluid, looking like pus, found in various places. As usual in these cases, when submitted to the microscope, it proved to be fibrinous (granules, granular cells, spherical and elongated, and fibres). These same cells, spherical, constituted the bulk of the deposit in the urine, as you have mentioned in the history of the case. The uterus was so softened and bound down by adhesions, that it was with some difficulty discovered. When exposed, it appeared five or six times its normal size; its anterior surface of the same dark, gangrenous hue as the intestines. On its left border, anteriorly, was seen a ragged opening of about one inch and a half, involving also the vagina to the distance of one inch, making an opening of at least two and a half inches. The whole mass was removed and preserved in a cold place for further use. The anterior wall is gangrenous throughout, and much thinned; the whole internal surface

\* These facts were partly ascertained by careful inquiry from the patient, nurse, and friends, and partly from the physicians.

is gangrenous; but the posterior wall appears otherwise unaffected, its peritoneal surface being intact. No incision was made into its substance. Other abdominal organs healthy.

P. C. BARKER, M.D.,  
WILLIAM YOUNG, M.D.

COLD SPRING, March 17, 1863.

DR. CLARK.—There are two or three omissions in the report, which it would be desirable to have supplied before we could be quite sure as regards the nature of the opening. It is not stated, for instance, whether the opening was round or linear. Again, in regard to the clots, nothing is said of their appearance, in order to enable us to form a judgment as to their age.

DR. YOUNG, of Cold Spring, by invitation, stated that the opening was linear, and that the clots were of a very pale yellow color. He also remarked, in answer to a question from Dr. Clark, that the specimen was fetid at the time it was removed from the body.

DR. CLARK.—There is no way of accounting for that rupture, except by assuming one of two suppositions—either it was an actual laceration at the time of delivery, or it was the result of a slough produced by the pressure of the child against the bones of the pelvis. The position of sloughs from this latter cause is more commonly anterior than lateral. In this case the point was midway between, but it is certainly not improbable that a slough might not have occurred in that situation. It would strike me, therefore, inasmuch as the symptoms of peritonitis occurred very soon after delivery, that there was a fair chance that the rupture might have occurred previous to the peritonitis, and consequently previous to the time that the slough would have been completed to produce a perforation.

DR. FINNELL remarked, that the uterus presented to him the appearance of one that had been ruptured for some considerable time previous to death.

DR. CLARK stated that another question came up in reference to the supposition that simple rupture was produced by manipulation during delivery, which was perhaps not easy to solve, viz. the occurrence of a slough anterior to the rupture. A simple rupture of the uterus was not usually attended by gangrene, any more than any similar wound in other parts of the body. Another feature in this case was interesting in regard to the treatment in the case, as it was evident to him that the peritonitis was substantially cured, and that such a result was brought about by the free use of opium.

The Society then adjourned.

## American Medical Times.

SATURDAY, SEPTEMBER 12, 1863.

### THE FREEDMEN OF THE SOUTH.

Among the grave social and political questions growing out of the present war, one is especially pressing itself forward for immediate solution. It is the present and future condition of the Freedmen of the South. A nation has, indeed, been born in a day. And it is a nation of infants, whose intellectual, social, religious, and even physical faculties are in an undeveloped condition, or even in a nascent state, without proper direction. History affords no more interesting example of the sudden deliverance of an oppressed and imbruted race from the hands of the oppressor. And this act has been accomplished without a solitary preparatory measure. Fresh from the fields of the taskmaster, untutored except in the vices of the most savage and debased life,

accustomed to be the recipients of every imposition which the passions, prejudices, or selfishness of man can inflict, the Freedmen of the South lie helpless at the feet of the Government and people of the United States, mutely imploring their succor. What shall be the future social and civil condition of this people is a problem which can be solved with the utmost certainty, and the responsibility of its proper determination rests with the Government.

And it is gratifying to know that our Government, notwithstanding the pressure of the grave and important duties of state, is mindful of the wants of this humble class of persons, and has taken initiatory steps towards the practical establishment of their social and civil condition in their new relations. A Commission has been appointed, composed of eminent philanthropists, to inquire into the condition of the colored population emancipated by the President's proclamation and by acts of Congress, and to report what measures are necessary to place them in a condition of self-support and self-defence, with the least disturbance of the great industrial interests of the country. The proper basis of this inquiry is the vital statistics of the African race and the mulattoes, as well in the Northern and Middle as in the Southern States. In pursuit of this inquiry the Commission have issued the following series of questions, which are particularly directed to the medical profession:—

1. What is the number of the colored population of your town?
2. About how many pure blacks?
3. About how many mulattoes?
4. Does the colored population, if not recruited by immigration, increase or decrease?
5. Do mulattoes seem to you to have as much vital force to resist disease and destructive agencies as pure blacks, and as whites; and do they usually live as long?
6. To what diseases do mulattoes seem peculiarly liable?
7. Do mulatto families usually have as many children as white families?
8. Can you give instances within your own knowledge, of the number of children in one family born of, and reared to maturity by, mulatto parents?
9. Are the colored people generally industrious and self-supporting, or not?
10. How is it in the second generation with regard to the number and health of offspring?
11. Through how many generations has any family of mulattoes been known to persist?
12. Do the mulattoes seek public charity in greater or less proportion than whites?
13. Do you consider them, upon the whole, as valuable members of the community, or not?

It is surprising how little attention the vital statistics of the colored people have received in this or any other country. Although they enter largely into the population of many nations, few observations have been made upon their peculiarities, either social or physical. We know little of the effects of expatriation upon the African; of the influence of particular climates; of his hereditary tendencies to disease. We know as little definitely of the mulatto; of the influence of amalgamation in developing or deteriorating the different races; whether the mixed races are as fertile and as long lived as the parent stock untainted. These and similar questions, if settled by indisputable facts, would now be of infinite value in determining the proper direction to be given to the efforts to elevate the freedmen. The failure to collect the vital statistics of the negro reflects the more severely upon the American statistician, because of the abundant facilities which he has had for this special study.

Unfortunately, in this country, too little attention has been given to vital statistics in general to render the study



of the peculiarities of any particular class of persons a direct and simple task. But four or five States have attempted to carry out a system of registration, and, with two or almost three exceptions, these efforts have proved of little real advantage in determining the social or physical condition of the people. The decennial census brings together a large mass of ill-digested facts, which have too little precision, and are too general for our present purpose. There are many observations widely scattered, which, collected and properly collated, would throw much light on many of the questions above proposed. But in the absence of such collection, or of full vaccinate registration reports of the different States, the Commission must rely upon the efforts of individuals interested in this subject. To the medical profession they make the appeal more directly, because this department of research belongs peculiarly to our province. It is to be hoped that medical men so situated as to give correct replies to the several questions above proposed, will hasten to make full returns to the Secretary of the Commission, DR. S. G. HOWE, of this city.

### THE WEEK.

A REPORT has recently been presented to the French Academy of Medicine, on Vivisections, of which the following are the conclusions:—

"1. Vivisections are indispensable to physiology, and operations on living animals are necessary for learning the manoeuvres of operative medicine in the veterinary art. 2. They should be undertaken with reserve, and the greatest care should be taken not to give them a character of apparent cruelty. 3. The experimenter should always have in view a real progress in science. 4. Students should not perform experiments except in the great centres of study, under the direction of the professors. 5. Every means at the disposal of science for the diminution of pain should be put into requisition by the experimenter."

The medical press of France and England oppose the practice of vivisections with strong and well considered arguments. A Paris journal says:—

"Magendie, alas! performed experiments in public, and sadly too often at the College de France. I remember once, amongst other instances, the case of a poor dog the roots of whose spinal nerves he was about to expose. Twice did the dog, all bloody and mutilated, escape from his implacable knife; and twice did I see him put his fore legs around Magendie's neck and lick his face. I confess—laugh, Messieurs les Vivisecteurs, if you please—that I could not bear the sight. And again, alas! M. Cl. Bernard performs vivisections in public in his course of physiology. It is, indeed, true that Ph. Bérard, professor of physiology, never performed a single vivisection in his lectures, which were brilliant, elegant, and animated. But Bérard was an example of a singular psychological phenomenon. Towards the close of his life, so painful to him was the sight of blood and the exhibition of pain, that he gave up the practice of surgery, and would never allow his students to witness a vivisection. But Bérard was attacked by cerebral hæmorrhage, and the whole tone of his character was thereby afterwards changed. The benevolent man became aggressive; the tolerant man, irritable; the hesitating and doubtful man, resolute and positive. Moreover, he became an experimenter, and passed whole days in practising vivisections, taking pleasure in the cries, the blood, and the tortures of poor animals. Let us use, but not abuse, the practice."

THE ACADEMY OF MEDICINE, after the usual recess of two months, will resume its meetings on Wednesday evening

next, the 16th inst. From the ability and reputation of the gentlemen whose names have already been announced in connexion with the varied and interesting list of papers contained in the circular published in the MEDICAL TIMES in July last, the profession may justly anticipate a profitable winter session. We hope the discussions will be more thorough than heretofore, as ample opportunity is given for preparation before each paper is read.

AMONG the recent changes in the Medical Department of the Army, we notice that Medical Inspector JOHN M. CUYLER, U.S.A., has been placed in charge of the office of the Medical Inspector-General. DR. CUYLER was formerly a Surgeon in the Army, and for a considerable period Medical Director of the Department of Eastern Virginia. He is a most capable and efficient officer, who has won the respect, esteem, and confidence of every one with whom he has had official relations. The management of the Bureau of Sanitary Inspection could not be intrusted to more worthy hands.

## Reviews.

THE HISTORY, PREPARATION, AND THERAPEUTICAL USES OF THE CITRO-AMMONIACAL PYROPHOSPHATE OF IRON, NAMED IN BRIEF PYROPHOSPHATE OF IRON. BY E. N. CHAPMAN, A.M., M.D., Professor of Therapeutics and Materia Medica, Professor of Clinical Obstetrics, and Physician in the Long Island College Hospital. (Reprinted from the Boston Medical and Surgical Journal.) Pp. 12.

IN this pamphlet PROF. CHAPMAN gives us an interesting sketch of an inquiry into the chemical and therapeutical properties of pyrophosphate of iron. The preparation which he employed was obtained as a gelatinous precipitate in the reaction between the pyrophosphate of soda and the tersulphate of iron in solution. A given proportion of citric acid in solution is neutralized by liquor ammoniac, as shown by test-paper, when the pyrophosphate is added, and the liquid boiled until the salt is dissolved, which gives the citro-ammoniacal pyrophosphate of iron in solution; from which we may obtain the solid salt by evaporating to a thick consistency, and then spreading the product on large plates of glass. In his opinion the citro-ammoniacal pyrophosphate of iron affords certain marked advantages over the preparations of iron hitherto in use. Its tastelessness, in solution with sugar, and elegant appearance, in our day, when the nauseous doses of the older practitioners will not be tolerated, are important items in the case of children, or adults even, when the employment of a remedy is demanded for a period of time. He notices a marked peculiarity in the pyrophosphate of iron to be the fact that it will scarcely ever in any case disagree, and very frequently patients who cannot tolerate the ordinary forms of iron will bear this well, and receive great benefit from its use. Like the others, it may fail to add to the blood a richer pabulum, from some fault in the vital processes of nutrition; yet, unlike these, it will not aggravate the disorder for the relief of which it was given.

Another and more important property of this preparation is the pyrophosphoric acid which furnishes the phosphorus to the blood. Phosphorus is now known to be a constituent of the nervous centres, and hence it becomes an important remedy in certain diseases. Prof. C. says:—

"In many conditions occurring in disease there might be a lack of this constituent, in a due proportion; precisely as there is of iron in anæmic states of the blood, when our only resource would be to present it in some assimilable form to the system, as there are no substitutes for the elementary bodies. In the case of phosphorus, here has always lain the difficulty; under-

going a slow oxidation or combustion at ordinary temperatures, even when floating on water, its substance would be burnt in the stomach, and a small particle adhering to the mucous surface would occasion irritation or inflammation. It could not be absorbed as phosphorus, and could only be remedial by the phosphorus and phosphoric acids that are formed. These would undoubtedly combine in the stomach with earthy or alkaline bases, and be reduced to the state of the phosphates existing in the food. These, we know, suffer but little change in the blood, being found unchanged in all the solids and fluids, but particularly in the bones. From them, however, in normal, healthy nutrition, the phosphoric acid in the nerve-centres must be derived. Should there be a great depression of vital power, the acid is not liberated from its combination, in the same manner as we know the iron is not, from the materials for digestion. The iron set free by assimilation in the blood is appropriated by the hæmatin; the phosphorus by the brain-fat. In hydræmia we give the iron in an easily assimilated form—one that does not tax the vital powers in separating it from a chemical combination; and straightway the blood begins to regain its color, and strength and vigor are infused into every organ. When a certain stage of recuperation has been attained, as shown by a more florid blood and a stronger pulse, the iron will be readily appropriated from the food, which, normally, is the source whence it is always obtained. The fault, originally, lay not in the absence of iron in the substances presented to the blood, but in an imperfect elaborating power, which failed to assimilate it. In like manner, I think, phosphoric acid may, from the same defect, not be separated from its compounds, and thus the ganglionic nervous centres be wanting in their normal stimulus. Hence would arise many nervous and neuralgic diseases, and nervous complications in many forms of debility. It is necessary for us to pass the phosphoric acid into the blood. This we can only do by giving it in a saline state, with a base that would be assimilated, and thus set it free. This is accomplished by the iron, which we know, in ordinary medicinal doses, is used up in the blood; in other words, is appropriated by the hæmatin, and cannot be detected by any tests. It is a natural constituent in the red globules, and, consequently, not being foreign to the body, behaves precisely as any of the other elementary principles that form its structure. Strictly speaking, it is a food, and must be supplied as much as starch, sugar, oils, and flesh."

The clinical facts which Prof. Chapman records are embraced in the following extracts from the concluding pages of this interesting paper:—

"Whenever the blood becomes thin and watery, there are, almost invariably, troublesome attendant symptoms, seriously retarding the restoration of the patient to health. In all, there will be a lack of nerve-power, from the hydræmic state of the circulation. Hence, could we temporarily augment the stimulating properties of the blood, whilst we are administering the iron, we should prepare the way and present the conditions required for its assimilation, which otherwise might be impossible. Experience has taught most physicians this practical fact, and the indications have usually been fulfilled by the simultaneous use of wine and iron. We have found the pyrophosphate singularly appropriate under these circumstances, and as superior as a natural excitant must ever be over any substitute we may devise. Persons who have been over-worked by mental application and prostrated by disquietude and care, or persons who have a shattered nerve-power from some constant source of bodily suffering, have a thousand anomalous symptoms dependent on an imperfectly generated and distributed nerve-power; such as wakefulness, trembling, spasmodic movements, palpitations, etc. For this class of symptoms, the pyrophosphate of iron often affords relief in two or three days; and thus prepares the way for the ultimate cure that may be expected from the martial salts. Many times patients have expressed wonder at the calming and tranquillizing effects of the medicine; not only in mere functional aberrations and irregularities, but also in cases where actual disease existed in the nerve-centres. In both instances the stimulation is immediate and transient, and can be of no avail, excepting by removing irregular nervous distribution; whilst the iron is appropriated more readily by the organic forces now freed from a great source of disorder.

"In palpitation of the heart in anæmic subjects, I have seen many instances of the power of this remedy in removing this symptom long before the blood was restored to its normal con-

dition. But palpitation, when not due to impoverished blood entirely, may be, oftentimes, equally amenable to this remedy.

"For all the varied and anomalous symptoms of hysterical patients, which are usually some phase of irregular distribution of the nervous influence, the pyrophosphate acts with singular efficiency, diffusing and equalizing the nerve-power, and thus secondarily restoring a more active capillary circulation and a more healthful play of all the functions. Cases illustrative of this point are unnecessary in the milder forms of nervous disease, since the claims of our remedy are sufficiently vindicated in the severer ones hitherto mentioned.

"The pyrophosphate of iron has another property scarcely to be anticipated; and one we should never discover except by actual observation. All of the common preparations of iron are apt to oppress the stomach, coat the tongue, and destroy the appetite; especially when the patient is much debilitated. Many, from a delicate, sensitive organization, cannot, under any circumstances, take iron with profit, it being, in their language, too heating. The pyrophosphate is friendly to the stomach, will never cause any irritation of the gastric surfaces, and, to our knowledge, has never disagreed with any patient, however incompatible the other forms may have been. Besides, it appears to possess a tonic power, and will restore the appetite and digestion after the failure of bitters, quinine, wine, etc., often in extreme cases of anæmia, amenorrhœa, and chlorosis, as we have witnessed in many instances in our obstetric clinique. It seemed to afford just the grade of stimulus required by the stomach; and the improvement thus initiated continued without interruption, under this single remedy, to the complete cure of the patients. This acceptability, friendliness, corrigent and roborant action of this form of iron on the digestive organs, is a valuable peculiarity which renders it, in many persons and in many states of disease, superior to all others, and perhaps to any drug whatsoever. Besides, its tastelessness, when dissolved in syrup, is a great recommendation in this age of sugar, when patients desire to die *sweetly*, and will not endure anything nauseous or unpleasant, though death be knocking at the door."

TRANSACTIONS OF THE MEDICAL ASSOCIATION OF SOUTHERN CENTRAL NEW YORK, at the 12th, 13th, 14th, and 15th Annual Meetings, held in 1858, '59, '60, and 1861. Binghamton: 1863. Pp. 79.

This Society has been one of the most active and useful medical organizations in this State. It embraces several of the southern tier of counties, and is purely scientific in its character. Its annual meetings are generally well attended, and the sessions are rendered interesting and instructive by the free interchange of opinion and the reading and discussion of papers. The papers in this pamphlet embrace those which have accumulated during four years, and consist principally of details of important cases occurring in the practice of individual members. We have space only to give the following contents:—Essay, "What are the advantages of this Association?" by H. S. West, M.D.; Cases of Cerebro-Spinal Meningitis, by C. M. Kingman, M.D.; Statistical Report on Obstetrics, by G. W. Bradford, M.D.; Amaurosis, as the result of an effusion of blood upon the Retina, by J. G. Orton, M.D.; Cases of Convulsions, by L. H. Allen, M.D.; A Unique Case, by J. C. Tappan, M.D.; Case of Caries of the Bones of the Ankle-Joint, by A. Baker, M.D.; Case of Puerperal Fever, by Geo. P. Cady, M.D.; Ovarian Disease, successful treatment by operation, by Silas West, M.D.; Radical Cure of Hernia, by E. G. Crafts, M.D.; Cerebro-Spinal Meningitis, by C. Green, M.D.; Lithotomy in the Female, by Daniel Holmes, M.D.; Extracts of Letter from H. S. West, M.D., of Sivas, Syria, Operations for Lithotomy and Strangulated Hernia; Case of Cerebro-Spinal Meningitis, by S. H. French, M.D.; Operation for Strangulated Hernia, by Fredk Hyde, M.D.; Report on Obstetrics, by H. S. Chubbuck, M.D.; Case of Compound Comminuted Fracture of the Ankle Joint, by H. N. Eastman, M.D.; Ovarian Tumors, by P. B. Brooks, M.D.; Case of Encephaloid Disease of the Hip-Joint, by Daniel Holmes, M.D.; Cases of Encysted Tumors, by Nelson Nivison, M.D.; Medical and Surgical Statistics, registered by J. G. Orton, M.D., for 1860 and 1861.

## Correspondence.

### REMARKS ON AMPUTATIONS AND RESECTIONS IN GUNSHOT FRACTURES.

[In a Letter to Prof. March.]

By A. H. HOFF, M.D.,

SURGEON-IN-CHARGE OF THE STEAMER D. A. JANEWAY.

THE subject of resection and exsection is still receiving especial attention, and the more I see, the less favorably I am inclined towards them. The dangling arms, and necessary secondary amputations, are quite too numerous, and the results too unfortunate to recommend them. This may be, in a measure, the fault of the operators. Yet, I think there are sufficient reasons, aside from this, to condemn them. I have no doubt that there are suitable cases when operations of this kind would be preferable to amputations; but I am quite satisfied, so far as gunshot wounds are concerned, that but little success will attend them. I have had numbers of cases where these operations have been performed placed in my charge for transportation, and have had opportunities to compare results, and have always found those cases where there had been no surgical interference, and the simple treatment of an ordinary compound comminuted fracture had been adopted, much the most successful. The splintered bone is not necessarily denuded of its periosteum, and those portions that are will be disposed of; but at the same time, the repairing process will have commenced, and that peculiar enveloping process, welding together fragments, will go on *pari passu* with the destructive, and a well sustained system will soon demonstrate that nature is overcoming the evil. The dead substances are rejected, and new bone has cemented the separated portions, consolidating the shaft, and leaving, to our surprise, a very useful and partially movable joint, or in the continuity an almost perfect limb. Out of some forty cases of compound comminuted fractures of the thigh that I have received on board the boat, the majority of the cases totally unsupported, which were at once properly transported and transferred to the General Hospital in charge of Prof. Hodgson of St. Louis, nearly all recovered, with useful limbs, and the amputations and resections in almost every instance proved fatal; and the resections that did recover were much more tedious and productive of greater deformity. Fond as I am of operating, and much satisfaction as there is in a successful result, it will ill compare with the success in those cases, where studying closely the reparative powers of nature, with the proper applications to best assist, you save mutilation, demonstrating the value of surgery, instead of its destructiveness. I will inclose some drawings of wounds penetrating the shoulder-joint, with the means made use of in fracture for their support. The same apparatus I make use of in fracture of the arm, and find it is the most comfortable one, even in exsection of the elbow-joint. It supports from the neck and shoulder, differing from certain others by supporting instead of extending. It can be applied easily, and be made from a crocheted stick; and the immediate support thus obtained is of great importance as to result, and a great comfort to the wounded man, who, instead of being obliged to walk with the broken fragments grating against each other and lacerating the tissue until, fainting from agony, he becomes exhausted and falls to the ground, to be rudely dragged on a stretcher or lifted into a rough jolting wagon, thus destroying all chances, I might almost say of life, is enabled to walk with comfort, saving that terrible inflammatory action which with its results would so much increase the severity of the case. "A good stout jack-knife and a little ingenuity are all that are required." Excuse this little burst, but it brings up a subject of vast importance which is shamefully neglected, viz. the proper support of fractures. The support of a fracture on the field is an unheard-of thing, but an amputation an everyday occurrence. It is easier to cut

it off than support it; the operation shows skill, nerve, etc. etc., but to support a limb and try to save it savors too much of the "afraid to operate." If support has to be followed by an amputation, the amount of suffering saved by it would add to the chances of recovery. Experience shows amputation of thighs to be very unfortunate, and proper support on the other hand exceedingly successful. Neglect in this particular seems strange, as the greatest care has always been recommended in reference to moving persons with fracture, more particularly of the lower extremity. In the excitement of battle many things are neglected, groans are unheeded even by the surgeon. From my experience there is no necessity for this neglect, but it seems that, with the exception of those cases requiring operations, all are neglected or reserved for some future time. From this neglect the future is a most critical one for the sufferer. In reference to the best method of amputation, I would say that I have noticed that you always made flaps, and I take it for granted that you prefer them. I have changed my mind, however, after making some forty amputations, and very much prefer the circular. It makes an easier stump to dress, and as most of these men have to be transported soon after the operation, a much more comfortable one to handle. The surface exposed is not so great, and a more dependent opening can be maintained. The suppuration is less, and the patient not so likely to suffer from pyæmia. My circular operations have done much better than the flap, and have made better stumps.

U. S. HOSPITAL STEAMER D. A. JANEWAY,  
NEAR VICKSBURG, February 18, 1868.

## Army Medical Intelligence.

### ORDERS, CHANGES, &c.

During his absence, and until further orders, Surgeon-General Hammond is relieved from the charge of the Bureau of the Surgeon-General at Washington, and Surgeon J. R. Smith is assigned to duty therein as Acting Surgeon-General.

Assistant-Surgeon Samuel Adams, U.S.A., has been ordered to report in person without delay to Surgeon-General W. A. Hammond, to accompany him to Hilton Head, Headquarters S. C., and the Department of the Gulf.

Surgeon F. G. Snelling, U.S.V., late Medical Director 18th Army Corps, is on leave of absence in New York city.

The Army Medical Board convened last week in New York city for the examination of candidates for appointment as Surgeons and Assistant-Surgeons to regiments of colored troops, has been adjourned, in consequence of the members having been ordered elsewhere.

Surgeon J. H. Grove, U.S.V., has been relieved from charge of General Hospital, Jefferson Barracks, and assigned to duty at General Hospital, Benton Barracks, Mo.

Surgeon William Varian, U.S.V., has been relieved from duty as Medical Director, District of the Cumberland, and assigned to the charge of the General Field-Hospital, at Cowan, Tenn.

Surgeon J. V. Z. Blaney, U.S.V., has been assigned to duty as Superintendent of Hospitals on the Peninsula.

Assistant-Surgeon Roberts Bartholow, U.S.A., has been placed in charge of the Lincoln hospital, at Washington, D. C., relieving Assistant-Surgeon Harrison Allen, U.S.A., who remains on duty as executive officer.

Assistant-Surgeon Weisel, U.S.A., has been assigned to duty at the Conscript Camp, at Mason's Island, Washington, D. C.

The resignation of Assistant-Surgeon E. B. Cruice, U.S.A., has been accepted.

Leave of absence on surgeon's certificate of disability has been granted to Assistant-Surgeon W. S. Wilson, 15th Pennsylvania Vols., for thirty days, and to Acting Assistant-Surgeon J. C. Garland, U.S.A., for twenty days.

Surgeon T. P. Gibbons, U.S.V., has been honorably discharged the service of the United States, in conformity with General Orders No. 100, of 1863, from the War Department, he having been absent from duty over sixty days.

Surgeon A. E. Stocker, U.S.V., has been relieved from duty in charge of Chesapeake Hospital, Fort Monroe, Va., and Surgeon E. B. Dalton has been assigned to the charge thereof temporarily.

Surgeon D. B. Sturgeon, U.S.V., is out from Fort West, Arizona, on a scout against the Mimbres Apache Indians.

Surgeon E. Y. Chase, U.S.V., has been relieved from duty at Fort Vancouver, W. T., and assigned to the expedition to Canon City, Oregon. Surgeon Christian has been assigned to Fort Vancouver.

The resignation of Dr. Frank H. Hamilton, U.S.A., Medical Inspector, has been accepted by the President, to take effect August 29, 1868.

Surgeon John L. Le Conte, U.S.V., has been appointed Medical Inspector, vice Hamilton, resigned.

Surgeon-General William A. Hammond, U.S.A., left Washington, D. C., for the Departments of the South and of the Gulf, on Sunday the 9th ult.



## METEOROLOGY AND NECROLOGY OF THE WEEK IN THE CITY AND COUNTY OF NEW YORK.

## Abstract of the Official Report.

From the 24th day of August to the 31st day of August, 1863.

**Deaths.**—Men, 135; women, 105; boys, 175; girls, 203; total, 623. Adults 240; children, 383; males, 310; females, 313; colored, 11. Infants under two years of age, 308. Children born of native parents, 19; foreign, 315.

Among the causes of death we notice:—Apoplexy, 5; infantile convulsions, 35; croup, 5; diphtheria, 19; scarlet fever, 7; typhus and typhoid fevers, 18; consumption, 69; small-pox, 0; measles, 2; dropsy in head, 13; infantile marasmus, 50; cholera-morbus, 2; cholera infantum, 136; inflammation of brain, 13; of bowels, 12; of lungs, 19; bronchitis, 4; effects of heat and sun-stroke, 4; erysipelas, 0; diarrhoea and dysentery, 53. 362 deaths occurred from acute diseases, and 48 from violent causes. 422 were native, and 201 foreign; of whom 117 came from Ireland; 72 died in the City Charities; of whom 16 were in Bellevue Hospital, and 14 in the Immigrant Institution.

Abstract of the Atmospheric Record of the Eastern Dispensary, kept in the Market Building, No. 57 Essex street, New York.

Aug. 1863.	SIX A.M.			Wind.	TWO P.M.			Wind.	TEN P.M.			Wind.
	Temperature. °	Evaporation. Below.	Barometer.		Temperature. °	Evap. Below.	Barometer.		Temperature. °	Evap. Below.	Barometer.	
23d.	76.78	5	29.94	S.	86.9	29.96	S.	81	5	30.03	S.	
24th.	75.80	6	30.04	S.	87.11	30.07	S.	80	6	30.01	S.	
25th.	63.80	5	30.02	S.	84.9	30.00	S.	70	6	30.00	N.E.	
26th.	54.00	5	29.93	N.E.	66.12	29.94	N.W.	61	8	30.01	N.E.	
27th.	55.55	8	29.99	N.W.	69.13	30.03	N.W.	57	10	30.00	N.E.	
28th.	56.60	4	29.97	N.E.	65.5	29.94	N.E.	58	4	29.91	N.E.	
29th.	54.62	8	29.91	N.E.	76.10	29.93	S.	59	4	29.86	S.	

**REMARKS.**—23d, Clear, sultry day. 24th, Clear, sultry day. 25th, Variable, sultry day; rain 4 P.M. 26th, Rain, clear, with fresh wind. 27th, Fine day, with fresh wind. 28th, Rain, variable, cloudy, with light rain. 29th, Variable day, with fresh wind most of the time; sultry afternoon; shower after 5 P.M. Rain for the week, one inch.

## SPECIAL NOTICES.

THE NEW YORK ACADEMY OF MEDICINE will resume its regular meetings on Wednesday Evening, 16th inst., at 8 o'clock. DR. LOUIS ELSBERG will read a paper on "The Topical Medication of the Larynx and the neighbouring Organs under Sight," which will be followed by remarks upon it by DOCTORS BUCK, H. GREEN, and others. After which observations on the THERAPEUTICS OF DIRECT INHALATION OF STEAM IN MEMBRANOUS CROUP AND INFLAMMATION OF THE AIR PASSAGES," by DOCTORS J. H. VEDDER, A. CLARK, and others.

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\* R. Stone, M.D., will perform the duties of this department.

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## CONTENTS.

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NOV 5, 1863